

LAND USE, PLANNING, AND INFRASTRUCTURE ACTIONS FOR CEDAR RIVER POPLULATION (Tier 1 Subareas)	
<p>POLICY/INSTITUTIONAL CONTEXT:</p> <p>Jurisdictions: Renton, King County, Maple Valley</p> <p>Growth pressures (inside UGA): City of Renton, unincorporated King Co (including East Renton Potential Annexation Area (PAA), Fairwood PAA, West Hill PAA, and other areas), Maple Valley. Note that Renton's Urban Center borders Cedar River and Lake Washington and is targeted to take in larger concentration of residences and jobs in next 20 years.</p> <p>Percent of Tier 1 subareas inside UGA: UGA runs through reach 5 in Lower Cedar Subarea; 34% of combined Lower and Middle Cedar subareas is inside UGA.</p> <p>Program/mitigation opportunities: Seattle HCP for Upper Cedar, I-405 mitigation, Cedar Basin Plan, Cedar River Instream Flow Commission</p>	<p>SCIENCE CONTEXT:</p> <p>Watershed evaluation rating:</p> <ul style="list-style-type: none"> • Lower Cedar Subarea: Tier 1 - Core Chinook use; Moderate watershed function • Middle Cedar Subarea: Tier 1 - Core Chinook use; High watershed function <p>Watershed evaluation summary: <u>Lower Cedar Subarea:</u> Relative impact factors are:</p> <ul style="list-style-type: none"> • High – flow volume • Moderate – total impervious area • Low - % of high gradient streams, road crossings <p>Relative mitigative factors:</p> <ul style="list-style-type: none"> • High - % of low gradient streams • Moderate – riparian forest cover, wetland area • Low – forest cover <p><u>Middle Cedar Subarea:</u> Relative impact factors are:</p> <ul style="list-style-type: none"> • Moderate – flow volume • Low - % of high gradient streams, road crossings, total impervious area <p>Relative mitigative factors:</p> <ul style="list-style-type: none"> • High – forest cover, riparian forest cover, % of low gradient streams • Moderate – wetland area

LAND USE ACTIONS FOR CEDAR RIVER MAINSTEM BASED ON TECHNICAL RECOMMENDATIONS IN WRIA 8 CONSERVATION STRATEGY

Notes:

- 1) Technical priorities from the WRIA 8 Conservation Strategy are listed in bold; recommended land use actions are listed for each technical area. Most technical recommendations are interrelated; many land use actions address multiple technical priorities.
- 2) Note that local jurisdictions in these subareas are doing or planning to do many of these actions.
- 3) See also Appendix D for a menu of land use actions described by criteria, and references on low impact development, critical areas and other land use topics.
- 4) Cedar land use actions were significantly revised from the 12/31/03 version, as a result of WRIA 8 Technical Committee and additional local jurisdiction staff review.

Protect forest cover and soil infiltrative capacity to maintain watershed function and hydrologic integrity and protect water quality; based on watershed evaluation, protection of remaining forest cover in Middle Cedar is high priority.

- C1 Consistent with Growth Management Act, Renton and the potential annexation areas in unincorporated King Co. within the UGA will be expected to absorb most growth; support this as a positive contribution to protecting rural portions of Cedar subareas. New development should be planned to minimize impacts on water quality and quantity, to the extent practicable.
- C2 Outside the UGA, King County should strictly enforce clearing restrictions in rural areas in Tier 1 and Tier 2 subareas, and look for other ways to maximize forest protection (e.g., PBRS and Timberland Programs, TDRs, acquisition). Forest cover protections should account for site geology, soils, topography, and vegetation to maximize retention and infiltration. King Co. should continue to

provide technical assistance to small forest landowners to encourage forest stewardship and improved forest management through forest stewardship plans.

- C3 In urban areas which are already developed, encourage protection of remaining trees and replanting through street tree programs, tree protection regulations, landscaping incentives, and redevelopment opportunities (see detail below under *riparian vegetation*). In new developments and plats, protect existing vegetation in sensitive areas through critical area regulations, and protect forest cover through low impact development, clustering, and other flexible tools, recognizing that urban densities can require significant tree removal. Support urban tree planting programs to increase tree cover. Support King County's Urban Forestry Program (including grants and technical assistance) to increase forest cover and forest health on public lands.
- C4 Continue to acquire properties for protection and restoration of forest cover, headwaters, riparian areas, etc. Jurisdictions should coordinate with appropriate entities to nominate high quality headwaters and spawning habitat as Outstanding Resource Waters (through Wash. Department of Ecology guidelines) to increase protection of these areas under the Clean Water Act.

Protect and restore riparian vegetation to provide sources of large woody debris that can contribute to creation of pools; based on watershed evaluation, enhancement of riparian buffers in Lower Cedar is high priority.

- C5 Protect remaining riparian vegetation in Lower and Middle Cedar through strict enforcement of aquatic buffers and limiting variances in sensitive areas. Conifers should be underplanted in deciduous buffers where possible.
- C6 Take advantage of redevelopment of public and private properties to negotiate for enhancement of riparian buffers and improvements to floodplain connectivity. Can offer regulatory flexibility (e.g., increased building density, reduced permit fees) in exchange for buffer and floodplain improvements.
- C7 Offer incentives (e.g., providing expertise, streamlined permitting, current use taxation, livestock cost share and voluntary farm plans) to encourage property owners to restore riparian function, remove impervious area, and improve floodplain connectivity.
- C8 Offer flexible approaches, e.g., wetland and habitat banking, to encourage offsite mitigation in high priority reaches.
- C9 Jurisdictions should develop critical areas ordinances, Shoreline Master Programs, and other policies/regulations based on best available science (BAS) in accordance with the Growth Management Act. The WRIA 8 Conservation Strategy should be used as one of a number of available BAS resources in drafting local policies and regulations.
- C10 King Co. and Renton should review policies that address presence of large woody debris in the river, and implications for recreational boaters and safety during flood events (active vs. reactive management of LWD); policies and rules should be adjusted as appropriate.
- C11 U.S. Army Corps' levee maintenance rules limit ability of jurisdictions to improve riparian habitat on "Corps certified levees"; discuss possible rule changes with the Corps.

Protect water quality to prevent adverse impacts to key life stages from fine sediments, metals, and high temperatures.

- C12 Adopt and enforce stormwater regulations and BMPs, as part of the NPDES Phase 1 and 2 permit requirements, which are consistent with Washington Department of Ecology's 2001 Stormwater Management Manual for Puget Sound, or which go beyond (e.g., to Tri-County standards) to address stormwater impacts from roads, development, and other activities. Encourage low impact development techniques in new construction.
- C13 Explore options to improve stormwater management in developed areas, e.g., through regional stormwater facilities and natural drainage systems (e.g., SEA Streets).
- C14 State and local transportation departments should address road runoff from all roads and retrofit existing roads as part of major maintenance, expansion, or upgrade projects. Stormwater impacts from major transportation projects (for new and expanded roadways proposed during the next ten years) should be addressed.
- C15 Jurisdictions should adopt and implement the Regional Road Maintenance Endangered Species Act (ESA) Program Guidelines for maintaining existing roads and drainage systems.

- C16 Work with Wash. Dept. of Transportation to address opportunities to improve stormwater management on State Route 169.

Protect floodplain connectivity; minimize road crossings to maintain floodplain connectivity.

- C17 Limit new development in floodplains and channel migration zones in Lower and Middle Cedar; develop and apply standards which minimize impacts to salmon. Renton and King County should share information about their floodplain regulations and programs. See also recommendations for redevelopment, under *restore riparian vegetation* above.
- C18 State and local transportation plans should minimize new road crossings.

Protect groundwater recharge areas and hydraulic continuity to maintain hydrologic integrity.

- C19 Protect groundwater recharge areas through Critical Aquifer Recharge Area (CARA) protections or other regulatory mechanisms.
- C20 Encourage low impact development, as noted above under *water quality*.
- C21 Coordinate with the King County Groundwater Protection Program on groundwater related issues. Work with the South King County Groundwater Management Committee to expand stakeholder representation on the committee and to update the groundwater management plan with current scientific data related to salmon and flows, and to include actions to improve instream flows for salmonids. Note that the current proposal is to finalize the groundwater management plan in its current format and then set up a new working groundwater committee to consider implementation in light of new data, reports, studies and Best Available Science.

Provide adequate stream flow to allow upstream migration and spawning.

- C22 Work with Dept. of Ecology and local health departments to improve enforcement of water rights. Identify and prevent illegal withdrawals. Address exempt wells and their impacts.
- C23 Work with City of Seattle, Cedar River Instream Flow Commission, and other stakeholders on policies, procedures and research related to effects of flow on potential habitat restoration projects such as additional side channels, and increasing interaction between river and its floodplain (may need to defer to adaptive management?).
- C24 Water conservation measures throughout WRIA 8 are important because Cedar R. provides drinking water to much of urban area. While conservation is important year-round, summer low flows are especially critical to salmon, therefore, conservation measures addressing landscape irrigation (both residential and commercial) are especially important for residents in the Cedar and throughout the WRIA. Water conservation efforts will become even more critical as human populations continue to grow in the watershed. Jurisdictions could promote utility water conservation programs during permitting process by providing educational materials, and encouraging expansion of these conservation programs.
- C25 Consider potential impacts on flows (quantity and timing) of global warming/climate change, coordinate with ongoing climate change research, and take appropriate action when new information becomes available. Coordinate with Shared Strategy for Puget Sound's chapter on climate change.

LAND USE, PLANNING, AND INFRASTRUCTURE ACTIONS FOR SOUTH LAKE WASHINGTON (Migratory Tier 1)	
POLICY/INSTITUTIONAL CONTEXT: Jurisdictions: Renton, Seattle, Mercer Island, Bellevue, Newcastle, King County Growth pressures (inside UGA): Seattle, Renton, unincorporated King Co (West Hill PAA), Mercer Island, Bellevue. Note that Renton's Urban Center borders Cedar River and Lake Washington and is targeted to take in larger concentration of residences and jobs in next 20 years. Percent of basin inside UGA: 100% Program/mitigation opportunities: I-405 mitigation	SCIENCE CONTEXT: Watershed evaluation rating: <ul style="list-style-type: none"> West Lake Wash. Subarea: Tier 1 – Migratory area; Lower watershed function East Lake Wash. Subarea: Tier 1 – Migratory area; Lower watershed function Watershed evaluation summary: Not applicable

LAND USE ACTIONS FOR SOUTH LAKE WASHINGTON MIGRATORY AREA BASED ON TECHNICAL RECOMMENDATIONS IN WRIA 8 CONSERVATION STRATEGY

Notes:

- 1) Technical priorities from the WRIA 8 Conservation Strategy are listed in bold; recommended land use actions are listed for each technical area. Most technical recommendations are interrelated; many land use actions address multiple technical priorities.
- 2) Note that local jurisdictions in these subareas are doing or planning to do many of these actions.
- 3) See also Appendix D for a menu of land use actions described by criteria, and references on low impact development, critical areas and other land use topics.

Reduce predation to outmigrating juvenile Chinook by: reducing bank hardening, restoring overhanging riparian vegetation, replacing bulkheads and rip-rap with sandy beaches with gentle slopes, and use of mesh dock surfaces and/or community docks.

- C26 Use WRIA 8 science foundation and Conservation Strategy as one of many "best available science" resources during CAO and SMP revisions. Increase riparian/shoreline buffers to extent practicable.
- C27 Encourage salmon friendly shoreline design during new construction and redevelopment of shoreline properties, and properties that border tributaries, by offering regulatory flexibility. However, analysis of tradeoffs – including upland land use impacts to the lake - would be necessary to insure a net benefit to salmon. Examples of regulatory flexibility include:
- ✓ Reductions in building setbacks, modest increases in lot coverage or impervious area (or increased density for multi-family) could be allowed if applicant removes, sets back or softens bulkhead and restores shoreline "vegetative management area" (riparian/lakeshore buffer).
 - ✓ Reduce prescriptive buffer widths if buffers are planted with appropriate native vegetation and a science-based evaluation determines that no negative impact results.
 - ✓ Allow or encourage flexibility from front yard setbacks to avoid allowing encroachment into back yard setbacks that would cause development to encroach further toward the lake. This policy could be incorporated into variance procedures, or it could be granted absent a variance as part of permit review of critical area development.
 - ✓ Research effectiveness of regulatory approaches in improving or protecting salmon habitat.
- C28 Increase enforcement and address nonconforming structures over the long run by encouraging or requiring that major redevelopment projects meet current standards. Challenge is that the area is mostly

developed, there is little undisturbed landscape left to protect, and much of the shoreline is privately owned.

- C29 Offer incentives to shoreline property owners to voluntarily remove bulkheads, improve beaches, revegetate shoreline, change dock design. Incentives include:
- ✓ Provide expertise (e.g., provide templates for shoreline planting plan, bulkhead design)
 - ✓ Expedite permit process at local, state and federal levels (e.g., allow more restoration activities as shoreline exemptions to make permitting faster and less costly)
 - ✓ Provide tax breaks through programs such as PBRS if landowner commits to stewardship activities through permit process. PBRS would likely provide most benefit to/be most appropriate for larger, suburban lots within urban areas.
 - ✓ Provide incentives for establishment of community docks or mooring buoys, rather than individual lot docks.
- C30 Discourage construction of new bulkheads. Develop guidelines to better assess need for bulkheads and restrict height to that necessary to protect the structure; height increases would be allowable only after appropriate analysis based on fetch, waves, wind velocity and direction, etc. Guidelines should take into account tradeoffs with other environmental impacts (e.g., presence of contaminated soils) and public safety hazards.
- C31 Address disincentive in Shoreline Management Act that can discourage shoreline restoration such as when the ordinary high water mark (OHWM) is moved landward as a result of removing a bulkhead, resulting in additional use restrictions placed on adjacent or applicant's property. Local jurisdictions have some ability to limit impact of setback from OHWM, but cannot move the 200 foot shoreline jurisdiction. See Table D-3-1, Appendix D for examples of language jurisdictions can adopt in their Shoreline Master Programs. May require change at state level.
- C32 Support joint effort by NOAA Fisheries, WDFW, COE, USFWS to develop specifications for new and expanded piers. Goal of this effort is for streamlined federal/state permitting for piers that meet these specifications (affects Corps Section 404 permit, Section 401 water quality certification, HPA). COE is developing Regional General Permit for new and expanded overwater structures in Lake Washington. NOAA Fisheries hopes to work with local jurisdictions to adopt similar permit requirements at local level (pilot in Mercer Island April '04).
- C33 Support development of federal/state/local specifications and streamlined permitting for salmon friendly bulkheads. Local jurisdictions would favor fixed and predictable mitigation.
- C34 Offer landscape, bulkhead, or dock contractor training and certification programs.
- C35 Support education and demonstration programs so that shoreline property owners can see examples of how salmon friendly bulkheads, docks, etc. actually work, and will therefore better understand and accept regulations/incentives about these docks and bulkheads.
- C36 Local jurisdictions should share information among themselves about ordinance language, templates and specifications.
- C37 Jurisdictions should continue to apply shoreline restoration, appropriate use of pesticides, native landscaping, etc. in parks and other publicly owned lands.

Protect and restore water quality in tributaries and along shoreline. Restore coho runs in smaller tributaries as control mechanism to reduce the cutthroat population. Reconnect and enhance small creek mouths as juvenile rearing areas.

- C38 Protect and restore water quality and other ecological functions in tributaries to reduce effects of urbanization and reduce conditions which encourage cutthroat. Protect and restore riparian buffers, wetlands, and creek mouths by revising and enforcing critical areas ordinances and Shoreline Master Programs, incentives, and flexible development tools. Outside of sensitive areas, support protection and restoration of forest cover, to the extent practicable, through tree replacement and street tree programs, and flexible development tools such as clustering.
- C39 Address water quality and high flow impacts from urban creeks and shoreline development (including residential, commercial, and industrial uses) through NPDES Phase 1 and Phase 2 permit updates. Stormwater regulations and programs should be consistent with Dept. of Ecology's 2001 Stormwater Management Manual, or beyond (e.g. to Tri-County guidance – see Appendix D). Specific stormwater recommendations include:

- ✓ Promote low impact/sustainable development along shoreline and throughout sub-areas through regulations, education, and incentives (e.g., develop guidelines, offer simpler permit review, reduce requirements for capital projects).
 - ✓ Adopt policies on pesticide use consistent with the January 2004 federal ruling banning certain pesticide use along salmon-bearing streams in the northwest. Application of pesticides should be in accordance with source control BMPs in Ecology's 2001 Stormwater Management Manual.
 - ✓ Address high stormwater runoff in urban creeks (which drain into Lake Washington), through LID, on-site stormwater detention for new and redeveloped projects.
 - ✓ Address stormwater impacts from major transportation projects (for new and expanded roadways proposed during the next ten years).
 - ✓ Address point sources that discharge directly into the lake.
- C40 Address water quality associated with marinas; note that marinas are regulated directly by Dept. of Ecology.
- C41 Reevaluate government policies toward aquatic weed control to minimize impacts to salmon habitat; coordinate with relevant agencies.

LAND USE, PLANNING AND INFRASTRUCTURE ACTIONS FOR CEDAR RIVER POPULATION (Tier 2 subareas) [Upper Cedar subarea is addressed under site specific projects]	
POLICY/INSTITUTIONAL CONTEXT: <i>Jurisdictions:</i> Maple Valley, Kent (watershed), Black Diamond, King County <i>Growth pressures (inside UGA):</i> Maple Valley and Black Diamond PAA (in Rock Creek); King County - Fairwood Potential Annexation Area (PAA) - in Peterson Creek <i>Percent of basin inside UGA:</i> Mostly outside the UGA; a small portion of Rock Creek is inside UGA (Maple Valley and Black Diamond PAA); a portion of Peterson Creek is inside UGA (Fairwood PAA). <i>Program/mitigation opportunities:</i> Kent water supply HCP	SCIENCE CONTEXT: <i>Watershed evaluation rating:</i> <ul style="list-style-type: none"> • <i>Peterson</i> Subarea: Tier 2 – Low Chinook use; Higher watershed function • <i>Rock</i> Subarea: Tier 2 - Low Chinook use; Higher watershed function • <i>Taylor</i> Subarea: Tier 2 – Satellite Chinook use; Higher watershed function • <i>Walsh</i> Subarea: Tier 2 - Low Chinook use; Higher watershed function <i>Watershed evaluation summary:</i> <u><i>Peterson Subarea:</i></u> Relative impact factors are: <ul style="list-style-type: none"> • Low - % of high gradient streams, total impervious area, road crossings, flow volume Relative mitigative factors: <ul style="list-style-type: none"> • High - % of low gradient streams • Moderate – forest cover, riparian forest cover, wetland area <u><i>Rock Subarea:</i></u> Relative impact factors are: <ul style="list-style-type: none"> • Low – flow volume, total impervious area, road crossings, % of high gradient streams Relative mitigative factors: <ul style="list-style-type: none"> • High - % of low gradient streams, riparian forest cover, forest cover • Moderate – wetland area <u><i>Taylor Subarea:</i></u> Relative impact factors are: <ul style="list-style-type: none"> • Low – total impervious area, road crossings • Moderate - % of low gradient streams, flow volume Relative mitigative factors: <ul style="list-style-type: none"> • Moderate - wetland area, forest cover, riparian forest cover, % of low gradient streams <u><i>Walsh Subarea:</i></u> Relative impact factors are: <ul style="list-style-type: none"> • Low – flow volume, total impervious area, road crossings, • High - % of low gradient streams Relative mitigative factors: <ul style="list-style-type: none"> • High - forest cover, riparian forest cover • Moderate - wetland area • Low - % of low gradient streams

**LAND USE ACTIONS FOR ROCK, TAYLOR,
PETERSON CREEKS, AND WALSH LAKE DIVERSION
BASED ON TECHNICAL RECOMMENDATIONS IN
WRIA 8 CONSERVATION STRATEGY**

Notes:

- 1) Technical priorities from the WRIA 8 Conservation Strategy are listed in bold; recommended land use actions are listed for each technical area. Most technical recommendations are interrelated; many land use actions address multiple technical priorities and are cross-referenced.

- 2) Note that local jurisdictions are doing or planning to do many of these actions.
- 3) See also Appendix D for a menu of land use actions described by criteria, and references on low impact development, critical areas and other land use topics.

Protect high watershed function by maintaining forest cover, soil infiltrative capacity, and riparian cover, and minimizing road crossings and impervious surface.

Inside Urban Growth Area:

- C42 Accommodate most future growth within existing (and future) incorporated areas and Potential Annexation Areas (PAAs): in Maple Valley and Black Diamond PAA for Rock subarea and in Fairwood PAA for Peterson subarea. Note that in the long-term, the UGA may expand further into Rock, Peterson and Taylor subareas. Manage new residential and commercial development to minimize impacts on water quality, instream flows, and aquatic buffers. Low impact development (LID) is key to protecting flows and water quality.
- C43 Encourage low impact development through regulations, incentives, and education/training. Examples include:
- ✓ Develop, adopt, and update as needed, local regulations and ordinances that improve the ability of builders to design LID projects, and for local government staff to review and approve those projects.
 - ✓ Encourage low impact development by providing technical information to developers about on-the-ground examples of what does and does not work in LID approaches; promoting demonstration projects through incentives and technical assistance, so that other planners and developers can see hands-on examples
 - ✓ Existing examples to show developers and planners include King County's three LID demonstration projects currently underway, Seattle's natural drainage program for retrofitting existing neighborhoods, Issaquah Highlands, and Maltby Joint Ventures-Chinook Homes.
 - ✓ Monitor existing facilities (e.g., green roofs, permeable pavements, etc.) to improve understanding of costs and benefits of LID techniques.
- C44 In urban areas, protect and restore forest cover through tree retention and tree replacement programs, landscaping guidelines, street tree programs, and urban reforestation programs (e.g., King County's Urban Forestry Program which provides grants and technical assistance to increase forest cover and forest health on public lands). Could require that new development over a certain size use clustering to preserve a certain portion of open space (e.g., 50% of site). If developer protects more open space, could offer incentives, such as density bonuses.
- C45 Continue to tighten regulations affecting riparian buffers, including larger stream buffers, more restricted application of buffer averaging, fewer allowable uses in buffers (e.g., not allowing stormwater facilities). Could approve administrative variances of development standards (on case-by-case basis) in order to avoid encroaching into a sensitive area buffer.
- C46 Nonconforming uses can be significant challenge in urban areas. Many existing structures along creeks encroach into required stream buffers and are nonconforming with development and environmental regulations. The degree of nonconformity could become even greater as buffers and other riparian protections become more restrictive. In order to decrease the level of nonconformity over the long term (e.g., 50 years), local jurisdictions should encourage or require that development come into conformity, depending on the degree of redevelopment. A sliding scale could be applied (e.g., based on redevelopment thresholds), where the greater the degree of redevelopment, the greater the expectation that the development come into compliance.
- C47 Encourage or require revegetation and enhancement of riparian buffers where existing buffer vegetation is inadequate (i.e. lacking in tree/shrub vegetation or dominated by non-native invasive species) to protect wetland or stream functions. Restoration should include underplanting of conifers in riparian buffers (identified as Basinwide recommendation for Peterson subarea during project meeting). Consider flexibility in prescriptive buffer width standards in exchange for stream habitat and buffer enhancement, particularly for redevelopment. However, any granting of regulatory flexibility needs to analyze site-specific tradeoffs – including upland land use impacts to the creek - to insure a net benefit to salmon. Incentives to encourage voluntary revegetation of riparian buffers and/or reconnection of floodplains include:
- ✓ Provide expertise (e.g., provide templates for riparian planting plan, assist private landowners with applications for grants to restore habitat)
 - ✓ Expedite permit process at local, state and federal levels (e.g., allow more restoration activities as shoreline exemptions to make permitting faster and less costly)

- C48 Increase incentives to urban areas to serve as receiving sites for transferable development rights (TDRs), e.g., offer amenity packages to cities, funded by Conservation Future Tax or other funding sources, to improve transit, urban parks, and open spaces in exchange for increasing densities.

In Rural Areas:

- C49 Enforce King County's updated critical areas ordinance, including stream and wetland buffers, clearing restrictions, and drainage review requirements. However, there are a number of considerations:
- ✓ Forest clearing restrictions should take into account substrate, topography, type of vegetation, etc. which affect rates of infiltration.
 - ✓ Clearing restrictions of 35% of lot area may not necessarily protect 65% of forest cover. For example, in Rock Cr. subarea, based on parcel by parcel analysis, current subarea forest cover of 72% could be reduced to 55% (based on analysis by Friends of Rock Creek Valley). Could analyze how 65% forest retention standard has been applied in Bear Creek over last ten years, to better understand on-the-ground results that this standard has or has not achieved, and then try to apply the standard more effectively.
 - ✓ Consider a customized approach which applies different standards for critical areas protection, depending on proximity to the critical area. In King County, the Executive Proposed Critical Areas Ordinance uses a variety of factors including subarea condition and parcel condition in conjunction with stewardship planning in determining clearing and buffer restrictions.
 - ✓ While the customized approach to critical areas protection is proceeding, consider a moratorium on new development in order to ensure that customized critical areas protections are applied.
 - ✓ Include field testing and monitoring of impacts of different standards on parcel by parcel basis.
 - ✓ PBRS is not sufficient incentive, and stewardship plans are not sufficiently flexible for some rural landowners.
 - ✓ Enforcement should be improved (see details below).
- C50 Recognize importance of enforcement for these and all regulatory recommendations. Current regulations are not always enforced, e.g., encroachment into riparian buffers is not uncommon among stream side landowners. Take steps to improve enforcement including:
- ✓ Provide education about why regulations exist in order to make enforcement more effective.
 - ✓ Templates should be provided for different types of parcels so that stewardship provision can be implemented with less design and analysis cost to individual applicants.
 - ✓ King County should connect their databases for County Assessor and DDES together so that biennial property review by assessor's office can inform DDES of any construction activities which have occurred which may or may not be consistent with development regulations. More efficient use of staff will become even more crucial as staffing levels are reduced.
 - ✓ DDES should work more closely with technical staff from WLR when implementing regulations so that DDES staff and applicants have better understanding of scientific justification for various requirements.
 - ✓ Re-examine how DDES staff are funded, and commit higher level of funding to enforcement recognizing its importance to effective natural resource protection.
 - ✓ Effective enforcement must also include monitoring and adaptive management, so that effectiveness of regulations (and related mitigation projects) is measured, and adjustments are made.
- C51 Promote low impact development to improve water quality and flows (see above under *urban areas*).
- C52 Promote flexible development tools, such as transferable development rights or environmental mitigation banking, to shift development to areas which are less environmentally sensitive and/or to mitigate impacts by protecting or restoring areas with highest ecological functions. In King County, the Executive Proposed Critical Areas Ordinance uses flexible standards in rural areas depending upon the subarea condition, parcel condition and stewardship planning (as noted above). In addition, the proposed ordinance includes a resource mitigation program, in which mitigation is channeled into those areas (mitigation reserve areas) where greater benefits can be achieved through matching mitigation needs with habitat restoration and preservation needs on a subarea or basin level.
- C53 Encourage clustering in rural areas in order to preserve contiguous areas of forest cover, wetlands, and riparian habitat. Consider the following factors to make clustering most effective:
- ✓ Total area of open space preserved needs to be large enough to support ecological processes of the preserved area;

- ✓ Total number of units needs to be large enough to be economically viable, but small enough to maintain rural character and levels of service. King County should consider increasing the limit above 8 houses per clustered development.
 - ✓ Clustered developments should be located to avoid checkerboard patterns and to preserve large, contiguous areas of open space, across different developments.
 - ✓ Cumulative impacts of water supply and sewage disposal should be evaluated when considering lot size and overall project size.
- C54 Continue to acquire parcels or conservation easements along creeks and in upland areas that provide valuable habitat but are not sufficiently protected by regulations.
- C55 Identify and protect headwater areas, including seeps, springs, and wetlands.
- C56 Limit future development (including roads) in floodplains; develop and apply standards which minimize impacts to salmon.
- C57 Offer existing and new incentives to protect and restore riparian and upland parcels beyond those that are protected through regulations. Incentives include current use taxation (e.g., King County's Public Benefit Rating system – PBRs and Timberland Program), Native Growth Protection Area programs, voluntary farm plans, and technical assistance (e.g., King County's program for small forest landowners). Protection programs need a stewardship element and adequate funding to ensure management and maintenance of these areas over the long term. Maintenance can be handed over to a local jurisdiction for public management, or if areas are managed privately, standards for review and enforcement must be established. If areas are privately managed, may be necessary to provide an inducement (e.g., additional tax break) in addition to education about value of properties and importance of maintenance.
- C58 Basinwide recommendations for Rock Creek subarea: protect and maintain habitat properties, e.g., from dumping; protect/restore riparian conditions; protect forest cover and limit impervious area in upper reaches and headwaters to protect hydrology; pending final transaction, 85% of riparian corridor will be in protective ownership so buffers are not key issue in Rock.
- C59 Basinwide recommendations for Taylor Cr. subarea: protect forest cover and headwaters.

Protect water quality to prevent adverse impacts from fine sediments, metals (both in sediments and in water), and high temperatures. Adverse impacts from road runoff and other sources of non-point source pollution should be prevented. In Taylor Creek, key life stages would benefit from a reduction in stormwater flows that have increased bed scour and deposition of fine sediments.

- C60 King Co. is updating their Phase 1 NPDES permit now (including updates of regulations and manuals). Maple Valley is scheduled to adopt its NPDES Phase 2 permit, consistent with anticipated Dept. of Ecology guidance, in 2005. These permit updates should address LID and other stormwater recommendations below, consistent with Dept. of Ecology's 2001 Stormwater Management Manual.
- C61 Adopt stormwater BMPs to reduce sediment inputs from bed scouring high flows and to address heavy metals and pollutants.
- C62 Identify sources and adopt source control BMPs to reduce fine sediment inputs to system (e.g., from new construction, erosion, and sedimentation from livestock access to streams). Basinwide recommendations identify new development occurring upstream in Peterson subarea as a likely sediment source, and new development in Walsh subarea (reach 3) as likely cause of loss of forest cover, clearing, and sedimentation. Note also there are a large number of dump trucks using roads in Rock Creek subarea; these loads should be covered.
- C63 Dept. of Ecology should address potential groundwater contamination from highly toxic hazardous wastes dumped at the Landsburg Mine. Ecology should address concerns, such as those expressed by the City of Kent, to improve analyses about where the contaminants are, or whether they are discharging, and take actions to address these water quality concerns which could impact Chinook and other salmonids in Rock Creek and in the Cedar River mainstem.
- C64 In Taylor Creek, adopt and enforce stormwater regulations and BMPs to reduce stormwater flows that have increased bed scour and deposition of fine sediments. Flashy flows should be addressed through forest cover retention, low impact development techniques, erosion control during construction, improved stormwater management on new and existing roads.
- C65 Enforcement (e.g., of clearing and grading ordinance and stormwater management program) is currently reactive (i.e., complaint driven); it should be more proactive (e.g., targeting construction sites, farms). Enforcement of stormwater, as well as of critical areas requirements, could be strengthened through a

“green” inspector group that would share expertise about various environmental incentives and regulations.

- C66 Work with livestock owners in rural areas on water quality BMPs, through livestock ordinance and voluntary farm plans. This is a basinwide recommendation for Taylor Cr. subarea. In urban areas, encourage fencing to keep domestic pets out of riparian areas.
- C67 Through planning for new roads or road widening projects, assess and recommend ways to minimize impacts on water quality, instream flows and sensitive areas. Low impact development includes BMPs for narrower roads, more pervious surfaces, reduced parking areas, maximized infiltration of stormwater, etc.
- C68 Adopt and implement Regional Road Maintenance Endangered Species Act (ESA) Program Guidelines for maintaining existing roads and drainage systems.
- C69 Retrofit existing roads as part of major maintenance, expansion or upgrade projects, in order to improve water quality treatment. Need BMPs for herbicides and pesticides along roads and power lines.

Protect and restore adequate flows during seasonal low flows to maintain pre-spawning holding and migrant life stage in Rock and Taylor Creeks.

- C70 Address maintenance and restoration of instream flows at all levels of government, recognizing that different aspects of the problem are controlled by different government agencies, e.g., water withdrawals are regulated by State Dept. of Ecology, low impact development techniques are affected by local development standards.
- C71 Basinwide recommendation for Taylor Creek subarea: address proposal by Cedar River Water & Sewer District to transfer wells from Cedar River to Taylor Cr. headwaters.
- C72 Basinwide recommendation for Rock Creek subarea: support baseflows in Rock Creek for pre-spawning migration, support efforts to enhance flows, work with City of Kent on HCP (see specifics below).
- C73 Support the City of Kent in developing its HCP for Kent’s public water supply system in Rock Cr. watershed in order to establish instream flows that are protective of Chinook. King County should share relevant data and analyses including spawner surveys, HSPF and EDT modeling, and historical salmon data. The HCP should consider options which would return flows in Rock Cr. to pre-1969 levels. Kent expects that the HCP will be completed by end of 2005.
- C74 Consider encouraging more new development in rural areas to go onto public water systems (e.g., from the Cedar or Green Rivers, Lake Tapps). This would provide less groundwater withdrawals, and more groundwater recharge from onsite septic systems, which need to be properly maintained and functioning. However, any proposal for interbasin transfer must consider instream flow impacts to Chinook and other salmonids in all systems. Friends of Rock Creek Valley is proposing that new residential development (and existing development with water quantity problems) be placed on public water through Covington Water District.
- C75 Determine extent of unauthorized withdrawals in all subareas. Develop and/or use existing database on extent of surface and groundwater withdrawals. In Rock Creek, there have been more spikes and drops in flows recently; determine what is causing this.
- C76 Work with Dept. of Ecology on education and enforcement of unauthorized water withdrawals (e.g., unpermitted withdrawals, permitted withdrawals that exceed authorized volumes).
- C77 Certain groundwater withdrawals are exempt from Ecology regulation; these exempt wells are subject to Seattle-King Co. Dept. of Public Health site review. These exempt wells include wells serving multiple residences but not exceeding 5000 gallons a day (also referred to as 6-packs, or not more than 6 homes on one well), watering of a lawn or garden not exceeding ½ acre. WRIA jurisdictions should work with Seattle-King Co. Dept. of Public Health, DDES, and state Dept. of Ecology to more effectively monitor and enforce the limit to ½ acre of irrigated land per exempt well. Could also encourage KC to place more restrictions on use of exempt wells. Note that proposed revisions to KC Comprehensive Plan include policies that would limit 6 packs (e.g., no more than one exempt well per development), and encourage users to hookup to existing water systems.
- C78 Consider using critical aquifer recharge area (CARA) protections more broadly to protect groundwater recharge for maintaining cold temperatures and flows in fish bearing streams, rather than solely for groundwater quality protection for potable water supply. Current King County proposal also protects recharge for non-potable supplies, including stream flows.
- C79 Coordinate with King County Groundwater Protection Program on groundwater related issues. Work with South King County Groundwater Management Committee to expand stakeholder representation on the

committee and to update the groundwater management plan with current scientific data related to salmon and flows, and to include actions to improve instream flows for salmonids. Note that the current proposal is to finalize the groundwater management plan in its current format and then set up a new working groundwater committee to consider implementation in light of new data, reports, studies and Best Available Science.

- C80 Adopt/enforce stormwater regulations and BMPs to address high and low flows, including forest retention, low impact development, infiltration standards. Identify opportunities to retrofit stormwater retention/detention facilities to better retain, release, treat, and infiltrate stormwater at public and private facilities. See additional stormwater recommendations above under *water quality* and *forest protection*.
- C81 Aggressive water conservation measures should be promoted by all jurisdictions and water purveyors to reduce impacts of water withdrawals throughout WRIA 8. Water conservation measures could include leak detection and repair, pricing structures that encourage more efficient water use and eliminate subsidies to large water users, water efficiency audits, and rebates for commercial and residential water-efficient plumbing fixtures and appliances.
- C82 Look into other water resource allocation processes that could suggest potential actions for this basin (e.g., 2514 processes elsewhere, and the recent state law on water conservation (SHB 1338) - the 2003 Municipal Water Law Water Use Efficiency).
- C83 Consider nominating Rock Creek as an "Outstanding Resource Water" under the Clean Water Act. Guidelines for this program are being developed by Dept. of Ecology and reviewed by the Environmental Protection Agency. Nomination could provide additional protection to the basin.